

A. Rejection of claims based on Honda

The Examiner rejected claims 14, 22-29, and 31-33 as being anticipated by Honda (Japanese Patent No. 08-005825). The Examiner's rejection, however, is premised on the assertion that Honda's developer is a solvent. (Office Action dated 8/1/02 at p. 3.) The Examiner acknowledges that Honda does not expressly indicate so, but the Examiner cites Fisch (U.S. Pat. No. 4,314,022) in an attempt to assert that Honda's developer is inherently a solvent. Applicant asserts that a careful reading of both references as well as other known art demonstrate that the teachings relied upon by the Examiner are not inherent in Honda.

First, contrary to the Examiner's characterization of Honda's teachings, Applicant contends that Honda is not merely silent concerning whether its developer is a solvent. Rather, Honda expresses teachings that indicate its developer is not a solvent. As addressed in a previous Response, this is demonstrated by Honda's indication that the developer alone is insufficient to remove a resin from the substrate; additional processing is required. Specifically, Honda repeatedly teaches that the developer is to be applied before a subsequent developing process. (*See Id.* at p.1 last line- p. 2 ln. 1; p. 2 ln. 13-15; p. 3 ln. 32-33; p. 4 ln. 26.) Further, Honda teaches that, in the past, the developer and additional processing were still not necessarily enough to remove the resin. (*Id.* at p. 3 ln. 17-20.) Moreover, it is noteworthy that Honda discloses that the developer is placed over the entire substrate, which is then subjected to the additional processing. (*Id.* at p. 2, ln. 36-38; p. 4, ln. 26-27; p. 5, ln. 6.) If the developer was a solvent with respect to the resin, then it would automatically dissolve all of the underlying resin. This runs contrary to the teachings of Honda, which requires a certain pattern of resin to remain. Thus, given Honda's express indications that its developer is not a solvent, there can be no inherent teachings to the contrary for Fisch to reveal. Applicant contends that any attempt to apply Fisch in such a manner will merely highlight the contradictions between the two references and further refute the Examiner's attempted inherency argument.

In fact, the very Fisch excerpt cited by the Examiner demonstrates such contradictions between the two references. The Examiner cited Fisch's claim 5, which indicates that its developer affects both photoresist that has been exposed to light as well as photoresist that has not been exposed to light. Such developer behavior is in direct contradiction to Honda's developer, as

addressed immediately above. To reiterate: Honda indicates that its developer does not affect photoresist that has been exposed to light; Honda further indicates that its developer may not even affect photoresist that has not been exposed to light. These conflicts, directed to the Examiner's very premise, indicate the inapplicability of Fisch's teachings to Honda and thereby demonstrate Fisch's inability to support teachings the Examiner deems to be inherent in Honda.

Such conflicts are explained by the fact that Fisch and Honda use their respective resists for fundamentally different reasons. Fisch's resist allows for patterning aluminum, while Honda's resist provides a color filter. Such fundamental conflicts also further demonstrate Fisch's inability to support Honda's inherent teachings.

The Examiner's assumption concerning inherent teachings in Honda are further refuted by prior art expressly indicating that resist developer is not necessarily a solvent. Specifically, U.S. Pat. No. 5,178,989 by Heller indicates that the electrolyte concentration within a developer may be such that it cannot dissolve either exposed or unexposed resist. (Heller at col. 9, ln. 34-46.) Moreover, Heller details at least one other circumstance involving thermal crosslinking wherein a developer cannot dissolve either exposed or unexposed resist. (*Id.* at col. 17, ln. 34-37. Heller is being submitted concurrently with this Response as part of an Information Disclosure Statement (IDS).)

Thus, the express teachings of Honda, Fisch, and Heller all demonstrate that there is inadequate support in the record suggesting that Honda's developer is inherently a solvent. As a result, the Examiner's attempted rejection based on Honda's inherent teachings is inconsistent with case precedent addressed earlier in prosecution. Specifically, Applicant cited *In re Zurko* (258 F.3d 1379, 59 U.S.P.Q.2d 1693 (Fed. Cir. 2001)) at page 5 of the Appeal Brief transmitted 5/6/2. *Zurko* holds that the PTO "cannot simply reach conclusions based on its own understanding or experience." (*Id.* at 1697.) Rather, the Court required that the PTO "point to some concrete evidence in the record" to support its findings concerning aspects of the relevant technology. (*Id.*) Applicant requests the withdrawal of this rejection accordingly.

B. Rejection of claims based on Isono

The Examiner rejected claim 28 as being anticipated by Isono (Japanese Patent No. 2-157763). In support of the rejection, the Examiner interpreted Isono as disclosing a vacuum device that is spaced from the material to be dissolved during processing. (Office Action dated 8/1/02 at p. 4.) Applicant contends that a careful reading of Isono demonstrates that the Examiner has misinterpreted Isono and that Isono discloses only the exact opposite configuration.

4 In refuting previously raised §103 rejections based on Isono, Applicant has already pointed out to the Examiner that Isono clearly, expressly, and affirmatively discloses only a vacuum device that contacts its workpiece. (See Amendment and Response to the Office Action of 2/28/01 at p. 5; Appeal Brief at p. 11-12.) Specifically, Applicant pointed out that Isono contains several instances referring to enclosing the edge of its substrate. (Isono translation at section entitled “Means to Resolve Problems,” section entitled “Effects,” and section entitled “Effectiveness of Invention;” *see also* the section entitled “Scope of Patent Application.”) Isono also goes into further detail, describing how sealing plates seal the edges such that the substrate edges are sealed off from the outer air. (*Id.* at p. 3, top ¶.) Isono’s figure 1 further emphasizes this teaching. Applicant also directs the Examiner to page 4, lines 4-6 of the Isono translation, which indicates that Isono’s device is configured to “hold and contain” the edge of the substrate.

Applicant submits that such disclosure refutes the Examiner’s interpretation of Isono, and the resulting misinterpretation demonstrates the Examiner’s failure to meet the *prima facie* burden for rejection. Moreover, Applicant contends that Isono discloses only the opposite of the Examiner’s interpretation concerning vacuum device spacing; hence, the *prima facie* burden for rejecting claim 28 cannot be met relying on Isono.

C. Rejection of claims based on Sato

Drop The Examiner rejected claims 12, 14, 17-21, and 28 as being anticipated by Sato (U.S. Pat. No. 5,993,547). However, the current claims benefit from a priority date extending at least as far back as the filing date of the grandparent application – serial no 08/618,072 filed 2/27/96. Because Sato was filed after that date (1/9/98) Sato cannot be considered prior art.

II. Rejection of claims under §103

The Examiner rejected various groups of the pending claims as being obvious in light of various combinations of references. Applicant addresses each basis for rejection separately below.

A. Rejection of claims based on Kottman in combination with Honda

The Examiner rejected claims 12-13 and 17-33 as being obvious in light of Kottman (U.S. Pat. No. 4,685,975) in combination with Honda. However, as mentioned previously during prosecution of these claims, every obviousness rejection requires that the multiple prior art references suggest to one of ordinary skill in the art to combine the references. (See *United States Surgical Corp. v. Ethicon Inc.*, 103 F.3d 1554, 1564, 41 U.S.P.Q.2d 1225, 1233 (Fed. Cir. 1997), *cert. denied*, 522 U.S. 950 (1997).) The Examiner must consider the references *as a whole*. (*In re McLaughlin*, 443 F.2d 1392, 170 U.S.P.Q. 209, 212 (C.C.P.A. 1971) (emphasis added).) Further, when the prior art contains conflicting references, the ability of each reference to suggest solutions to one of ordinary skill in the art must be considered. (See *In re Young*, 927 F.2d 588, 18 U.S.P.Q.2d 1089, 1091 (Fed. Cir. 1991).) Applicant contends that Kottman and Honda conflict to such an extent – in terms of both their general matters as well as the specific teachings relied upon by the Examiner – that one of ordinary skill in the art would be discouraged from combining their teachings.

1. Kottman and Honda conflict in terms of their main purposes

(5)

For instance, it is noteworthy that the main purpose and function of Honda is to make the time for developing the resin at the substrate edge equal to the time for developing the resin at the interior of the substrate. (Honda translation at ¶¶0007, 0011.) Honda achieves this by using concentrated developer at the substrate's edge to counteract its thicker resin. (*Id.* at ¶¶0006, 0007, 0011.) Because the substrate's edge is equally developed in comparison to the substrate's interior, it follows that the resin-removal process may be applied equally across Honda's

substrate, with no need for a specially-configured cleaning device or methods for the periphery. (See *Id.* at ¶0007.) However, Kottman proposes just such a cleaning device and method. (Kottman at Abstract; col. 2, ln. 32-35; FIGS. 1, 7.) As a result, Honda teaches one of ordinary skill in the art that Kottman's devices, materials, and methods are unnecessary. Conversely, Kottman teaches one of ordinary skill in the art that Honda's techniques are unnecessary because Kottman's special treatment of the substrate's periphery eliminates the need for Honda's special pre-treatment in that area. Thus, because each reference refutes the main purpose and function of the other, one of ordinary skill in the art would be discouraged from combining such references.

Applicant presented a similar argument against a previous rejection based on the Examiner's attempt to combine Honda and Matsumura (Japanese Pat. No. 5-175117). (See Appeal Brief at p. 5-6.) The Examiner's subsequent withdrawal of that basis for rejection suggests that such arguments are persuasive. Applicant contends that the current argument presented above against the current rejection is analogous and therefore equally persuasive as the previous argument countering the previous rejection.

—> ⑥ 2. Kottman and Honda conflict in their particulars concerning treatment of the workpiece edge

The differences in Kottman's and Honda's handling of their respective workpieces and edge dispensers illustrate another conflict between the references. Specifically, Kottman teaches moving its workpiece periphery past a stationed solvent nozzle by rotating a circular workpiece around its center. (Kottman at Abstract; col. 2, ln. 32 - col. 3, ln. 4; FIGS. 1, 7.) Further, in the event the generally circular workpiece has a flat portion, Kottman teaches using a "cam action," suggesting that the wafer moves closer to the nozzle. (*Id.* at col. 6, ln. 7-32; FIG. 3.) Honda, on the other hand teaches keeping its rectangular workpiece stationary while moving the developer dispenser along the workpiece's periphery. (Honda translation at ¶¶ 0004, 0006; FIG. 2.) Moreover, Honda teaches this technique for edge dispensing despite acknowledging other dispensing methods wherein the workpiece is rotated. (*Id.* at section entitled "Makeup" and at ¶¶ 0003, 0008.) Further, Honda even uses such a method for dispensing another material in another location. (*Id.* (referring to spinning-on resist).)

Thus, both references address generally moving a workpiece during processing and particularly rotating a workpiece around its center. However, Honda appears to one of ordinary skill in the art to reject applying that technique while treating the edge of its workpiece, whereas Kottman embraces that technique while treating the edge of its workpiece. As a result, each reference teaches the opposite of and therefore away from the other's edge treatment technique.

Further, both references address treating the straight edge of a workpiece. (*Compare* Honda translation at ¶ 0004 (describing a rectangular substrate) *with* Kottman at col. 6, ln. 7-32 and FIG. 3 (describing a flat portion of a wafer).) However, Kottman teaches moving the workpiece relative to a stationary nozzle to effectuate edge treatment (Kottman at col. 6, ln. 7-32 (describing "cam action")), whereas Honda teaches moving the nozzle relative to a stationary workpiece to effectuate edge treatment. Thus, once again, each reference is in direct conflict with the other.

As a result, one of ordinary skill in the art would interpret each of Kottman and Honda as rejecting the relevant techniques of the other. Such conflicts provide another instance that would discourage the ordinary artisan from combining these references.

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3. Kottman and Honda conflict in their particulars concerning applying suction at the workpiece edge.

The use of suction to remove edge beads or lack of reference thereto provides yet another conflict between the references. Honda expressly requires drawing in air with a vacuum suction part of its device while another part of its device drips developer onto the substrate. (Honda translation at ¶ 0006; FIG. 3.) Kottman is clearly aware of suction technology, as demonstrated by its use of a vacuum to hold the workpiece to a chuck. (Kottman at col. 1, ln. 30-35; col. 4, ln. 33-43; col. 5, ln. 16-17, 30-33; col. 6, ln. 62.) However, the Examiner admits that Kottman neither teaches nor suggests the use of suction for edge bead removal. (Office Action dated 8/1/2 at p. 4.) Nevertheless, the Examiner argued that one of ordinary skill in the art would be motivated to modify Kottman by including a suction mechanism for edge bead removal in the interest of facilitating that removal. Applicant contends that Kottman's acknowledgement of suction techniques in general yet silence concerning applying those techniques directly to edge bead

removal would be interpreted by the ordinary artisan as Kottman rejecting the direct application of suction techniques to its edge bead removal.

This contention is further supported by the fact that Honda does not appear to rotate its substrate while applying its develop, as addressed above. (Honda translation at ¶¶ 0004, 0006; FIG. 2.) Rather, Honda indicates that its substrate is stationary while the dispenser moves along the periphery. (*Id.*) Thus, other than that suction, Honda discloses no force that would assist in removing the developer during edge treatment. Kottman, on the other hand, does disclose an alternative force that one of ordinary skill in the art could use for removing its solvent – namely the centrifugal force present during solvent dispensing. (Kottman at Abstract; col. 2, ln. 29, 62-66; col. 7, ln. 24-32; col. 9, ln. 45-59.) Thus, with such a force present, one of ordinary skill in the art would view modifying Kottman to include a suction mechanism for edge bead removal as adding unnecessary redundancy given that edge bead removal is already facilitated by the presence of centrifugal force during solvent dispensing.

⑤ Other references cited during prosecution of these claims support Applicant's contention. For example, U.S. Pat. No. 4,518,678 by Allen, in a manner analogous to Kottman's teachings, (1) acknowledges suction techniques by using that technique to secure its wafer (Allen at col. 3, ln. 4-16; col. 4, ln. 10); (2) teaches dispensing an edge bead solvent onto a spinning wafer (*id.* at col. 4, ln. 15-23); (3) expressly acknowledges the contribution of centrifugal force in dispensing the solvent (*id.* at col. 3, ln. 68); and (4) lacks disclosure concerning the use of suction to directly assist in edge bead removal. Instead, Allen expressly teaches removing the solvent using "centrifugal forces, i.e., a centrifuging action" by increasing the rotation speed not just once, but twice in its process. (*Id.* at col. 4, line 43 - col. 5, ln. 5; FIG. 1.) Allen further expressly discloses a drain (element 30) for the coating process. (*Id.* at col. 3, ln. 4-16; Fig 4.)

Similarly, U.S. Pat. No. 5,444,921 by Milina acknowledges suction techniques by using that technique to secure its wafer (Milina at col. 1, ln. 12-25); teaches dispensing an edge bead solvent onto a spinning wafer (*id.* at col. 1, ln. 50 - col. 2, ln. 25); and lacks disclosure concerning the use of suction to directly assist in edge bead removal. Instead, Milina discloses a drain (element 26) for collecting excess fluid during operation of the system. (*Id.* at col. 4, ln. 29-31; FIG. 1.)

One of ordinary skill in the art is deemed to know of these references. (*In re Carlson*, 983 F.2d 1032, 1038, 25 U.S.P.Q.2d 1207, 1211 (Fed. Cir. 1992). A copy of *Carlson* is included in an

appendix to this Response.) Applicant contends that such knowledge will affect the artisan's perceptions of Kottman and motivations to modify Kottman's teachings. Specifically, the artisan will appreciate that when Kottman's edge bead solvent is applied, centrifugal force is already present, and that Kottman expressly acknowledges vacuum techniques yet refrains from directly applied those techniques edge bead removal. Guidance from Allen and Milina will discourage spending time, money, effort, and complication of machinery involved with sucking the dispensed liquid, as required by Honda. Rather, such references will motivate the artisan to use the already present centrifugal forces to facilitate edge bead removal.

Thus, the conflict between Kottman and Honda concerning edge bead removal, as demonstrated by those references as well as others known to one of ordinary skill in the art, provide yet another instance that would discourage such an artisan from combining Kottman and Honda.

4. Kottman and Honda conflict in their particulars concerning nozzle configuration

9 The Examiner's Kottman/Honda rejection is also premised on the assumption that Kottman's illustration of a dispenser below its wafer and Kottman's text concerning its dispenser above the wafer make obvious a configuration wherein a dispenser is above the wafer while another dispenser is below the wafer. (Office Action dated 8/1/02 at p. 5.) Kottman's FIG. 1 does disclose a nozzle under a wafer. However, the particular text cited by the Examiner states

[f]urther, nozzle **59** (FIG. 7) can be located adjacent surface **30**, i.e., above the wafer **26** for applying fluid for dissolving the resist to the portion of surface **30** adjacent edge **32**.

(Kottman at col. 5, ln. 62-65 (emphasis in original).) Applicant contends that, at best, this language supports relocating nozzle 59 from a position below the wafer to a position above the wafer. Nothing in this portion of cited text suggests the Examiner's proposition of providing one dispenser analogous to nozzle 59 above the wafer and another dispenser analogous to nozzle 59 below the wafer simultaneously. As a result, Kottman conflicts with Honda's FIG. 2, thereby further discouraging one of ordinary skill in the art from combining their teachings.

Additional problems with combining Kottman arise when the Examiner's cite is considered in the broader context of Kottman's disclosure as a whole. Although the Examiner's cited excerpt

appears to encourage a resist solvent nozzle above Kottman's wafer, Kottman appears to strongly discourage such embodiments in at least two other instances. In the first instance, Kottman addresses spraying solvent on a spinning wafer's periphery from a nozzle under the wafer. (Kottman at col. 6, ln. 7-31.) In this case, the wafer is not completely circular; rather, there is a flat portion. (*Id.*; FIG. 3.) Kottman warns that, if the wafer's general position remains stationary, then there will be times when the when the truncated portion of the wafer (corresponding to the flat area) will fail to block the solvent spray; as a result, the wafer's top surface will be undesirably sprayed. (*Id.*) To avoid this occurrence, Kottman provides the "cam action" addressed above. (*Id.*) In another example, Kottman warns that under certain circumstances, attempting to apply resist solvent to the bottom of a wafer may result in excess solvent that contaminates the wafer's upper surface. (*Id.* at col. 8, ln. 50 - col. 9, ln. 4; FIG. 10.) To avoid this occurrence, Kottman provides an overflow mechanism. (*Id.*) Such conflicting teachings within the same reference indicate that there is no clear direction in the art in general or in this reference in particular, thereby countering the Examiner's purported motive for combination. Moreover, the schizophrenic nature of Kottman's disclosure calls into question the ability of one of ordinary skill in the art to combine Kottman's teachings with any other reference, including Honda.

Thus, the conflicts between Kottman and Honda (as well as the conflicts within Kottman itself) concerning nozzle configuration provide still another instance that would discourage such an artisan from combining Kottman and Honda.



5. Kottman and Honda conflict in their particulars concerning nozzle orientation

The Examiner's Kottman/Honda rejection is further premised on the assumption that, in light of Honda, it would be obvious to modify Kottman's edge dispenser 55 from an orientation that is non-perpendicular with respect to the wafer to one wherein Kottman's nozzle is perpendicular to the wafer. (Office Action dated 8/1/02 at p. 5.) Applicant contends that Kottman's own disclosure as well as other references known to one of ordinary skill in that art would discourage this modification and the Kottman/Honda combination in general. Significantly, Kottman itself discloses another dispenser -- outlet 65 -- that is perpendicular with the wafer over its center. The fact that Kottman acknowledges one dispenser perpendicular to the wafer yet provides an edge

dispenser 55 that is non-perpendicular to the wafer suggests to one of ordinary skill in the art that Kottman has rejected a perpendicular orientation for its edge dispenser 55. Other references that were cited during prosecution and would be known to one of ordinary skill in the art also disclose a non-perpendicular edge dispenser. Figure 4 of Allen, for example, generally illustrates a nozzle assembly 40 that is non-perpendicular to substrate 10 and configured to dispense a solvent (*id.* at col. 4, ln. 2). Allen's figure 5 further details the nozzle assembly 40, and the related text indicates that nozzle 50 defines a non-perpendicular angle with substrate 10. (*Id.* at col. 3, ln. 22-31.) Allen further specifies that nozzle 50's positioning with respect to substrate 10 is "important." (*Id.* See also U.S. Pat. No. 5,289,222 by Hurtig at col. 1, ln. 48-57; FIG. 2 (describing and illustrating an edge bead removal nozzle 104C that is non-perpendicular with wafer 103); Isono at FIG. 1, element 4.) Such emphasis from art that an ordinary artisan would be aware of suggests that there is a reason in the art for the non-perpendicular orientation of an edge dispenser. The art's emphasis further suggests that altering that orientation would not be an obvious design choice but would in fact implicate an "important" factor in edge bead removal.

As a result, the express teachings in Kottman itself as well as other art known to an ordinary artisan suggest the intentional nature of the orientation Kottman's solvent dispenser 55 as well as the rejection of a perpendicular orientation therefor. Such express language in the art also refutes the Examiner's conclusion concerning obvious design choices. Moreover, Kottman's rejection of a perpendicular edge dispenser 55 would further be seen by one of ordinary skill in the art as a conflicting teaching with Honda's nozzle 12, thereby further discouraging their combination.

Thus, when Kottman and Honda are considered as a whole, including their conflicting teachings, one of ordinary skill in the art will appreciate that the references are incompatible on every level ranging from their general teachings to their specific devices and techniques. Hence, the ordinary artisan would be actively discouraged from their combination in general and the Examiner's proposed modifications in particular.

B. Rejection of claims based on Uchida in combination with Honda

The Examiner rejected claims 14-16 as being obvious in light of Uchida (Japanese Patent No. 56-073579) in combination with Honda. Significantly, the Examiner has attempted to cite this combination throughout the prosecution of this application. (Office Action dated 3/21/00 at p. 5-6; Office Action dated 9/6/00 at p. 3-5; Office Action dated 2/28/01 at p. 4-6; Office Action dated 11/19/01 at p. 2-3.) Accordingly, Applicant has previously argued against this combination. (First Amendment and Election in Response to the Office Action of 3/21/00 at p. 7-8; Amendment in Response to the Office Action of 9/6/00 at p. 9-10; Amendment and Response to the Office Action of 2/28/01 at p. 5-9; Appeal Brief at p. 14-20.) Applicant contends that the arguments raised against the Examiner's previous attempts to assert this combination apply to the Examiner's latest attempt. Below, Applicant reiterates the most relevant previous arguments and presents supplemental arguments tailored to the Examiner's specific reasoning in this latest Office Action.

Concerning the Examiner's specific reasoning in this latest Office Action, the Examiner began by discussing the apparatus disclosed in Uchida. (Office Action dated 8/1/02 at p. 5-6.) The Examiner then admitted that Uchida shows the tip of its apparatus contacting the edge bead. (*Id.* at 6.) Subsequently, the Examiner focused on Uchida's text indicating the distance between apparatus and the substrate under the edge bead. (*Id.*) The Examiner also went as far as to admit that Uchida does not illustrate its apparatus being spaced from the edge bead. (*Id.*) The Examiner then cited Honda as representing a conventional edge bead removal apparatus in that it is spaced from the edge bead. (*Id.*) The Examiner then concluded it would be obvious to space Uchida's apparatus from the coated substrate. (*Id.*) The Examiner believes motivation for that modification comes from the convention exemplified by Honda and the desirability of preventing wear and tear on the tip and eliminating excess cleaning. (*Id.*) The Examiner ended by announcing that "it is deemed to be within the level of one of ordinary skill in the art" to distance Uchida's apparatus from a substrate surface to remove coating material from the substrate edge." (*Id.*)

Applicant contends that the Examiner's reasoning is flawed, thereby demonstrating a failure to meet the *prima facie* burden for rejection. Further the express teachings of Uchida and Honda discourage their combination in general and the proposed modification in particular so that the *prima facie* burden for rejection cannot be met relying on this combination.

1. Flaws in the Examiner's reasoning

First, Applicant contends there are flaws in the Examiner's reasoning in terms of the Examiner's characterization of Uchida, the Examiner's belief concerning conventions in the art, the Examiner's motives for combination, and the Examiner's announcement concerning the skill level of an ordinary artisan. Applicant submits that any one or combination of these flaws demonstrate the failure to meet the *prima facie* burden for rejection.

(1)

a) The Examiner's mischaracterization of Uchida

The Examiner's characterization of the Uchida reference indicates an attempt to downplay the true import of that reference's teachings. For instance, the Examiner focuses on Uchida's text indicating a gap between Uchida's apparatus and the substrate. (Office Action dated 8/1/02 at p. 6 (citing the last page of the Uchida translation).) Applicant contends Uchida's disclosure is not surprising nor is it supportive of rejection given that there is a coating on Uchida's substrate and that Uchida's apparatus does contact that coating. The Examiner goes so far as to admit in one sentence that Uchida illustrates such contact. By the end of that sentence, however, the Examiner cited the gap addressed above, presumably in some attempt to lessen the effect of that admission. Curiously, the Examiner then describes Uchida in terms of what it does not illustrate, pointing out that "Uchida et al do not illustrate the apparatus being spaced above the thick film part." Applicant contends that Uchida is not so passive as the Examiner's characterization indicates. Not only does Uchida illustrate direct contact between its apparatus and the substrate coating, Uchida expresses that in its text as well. Specifically, Uchida affirmatively expresses that its suction nozzle "contact the coating solution." (Uchida translation at 3.) While the Examiner appears to be content to cite text believed to support rejection, Applicant invites the Examiner to also consider the text cited by Applicant. Applicant further contends that the Examiner is obligated to do more than trivialize express language and clear illustrations in Uchida. Rather, the Examiner must consider Uchida as a whole (*see McLaughlin*, 170 U.S.P.Q. at 212), including teachings that conflict with the proposed modifications and with teachings from other references

(see *Young*, 18 U.S.P.Q.2d at 1091). Applicant also requests that Examiner explain how disclosure of a coating between Uchida's apparatus and substrate supports rejection, especially when Uchida's apparatus contacts that coating. Until the Examiner does so, Applicant contends that the Examiner has failed to meet the *prima facie* burden for rejection using Uchida.

(12)

b) the Examiner's mistaken belief concerning conventions in the art

As part of the attempt to reject based on a Uchida/Honda combination, the Examiner supposed that Honda's teachings demonstrate the convention in the art -- at least in terms of the device's distance from a material on the workpiece during operation. (Office Action dated 8/01/02 at p. 6.) It is noteworthy, however, that of the latest four prior art references used to reject the appealed claims -- Honda, Kottman, Isono, and Uchida -- fully half of them teach contacting the material on the workpiece during operation. (See Isono at Fig. 1; Uchida at Fig. 3.) Hence the Examiner's own art refutes the Examiner's belief concerning what is conventional. Rather, the Examiner's selection of the most relevant art demonstrates that, at best, there is no clear direction in the art in terms of a device's distance from a material on the workpiece during operation. Lacking such direction, one of ordinary skill in the art necessarily lacks the motivation to combine the teachings in the manner proposed by the Examiner.

(13)

c) the Examiner's untenable motives for combination

As for the Examiner's suggestion that one of ordinary skill in the art would be motivated to substitute Uchida's teachings with Honda's teachings concerning device placement in order to prevent wear and tear on Uchida's device, Applicant notes that 50% of the Examiner's closest relevant art allows the device to directly contact a material on the workpiece. (Isono at Fig. 1; Uchida at Fig. 3). As a result, one of ordinary skill in the art is informed that such direct contact will not pose any wear and tear problems.

Regarding the Examiner's suggestion that one of ordinary skill in the art would be motivated to substitute Uchida's teachings with Honda's teachings concerning device placement in order to eliminate excess cleaning of Uchida's device, it is noteworthy that Uchida

acknowledges the cleaning issue as a problem with prior art devices (Uchida at ¶4 of part 3, latest translation) and purports to solve that problem with its device (*id.* at last ¶ of part 3). Hence, one of ordinary skill in the art is taught that Uchida addresses that concern without the need for modification, thereby refuting the Examiner's assumed motive.

Moreover, it is significant that the Examiner's articulated motives addressed directly above are contrary to Uchida's express teachings concerning device/workpiece layer contact. As a result, the Examiner is effectively arguing that one of ordinary skill in the art is prepared to reject a sizable and fundamental portion of Uchida's teachings. It is then questionable whether the artisan would put any value in the remnants of Uchida's disclosure. Thus, the Examiner's harsh criticism of Uchida's teachings suggest that an ordinary artisan would avoid its teachings altogether.

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d) Examiner's announcement concerning the skill level of an ordinary artisan

At the conclusion of the Uchida/Honda rejection, the Examiner announced that "it is deemed to be within the level of ordinary skill in the art to position the Uchida et al apparatus an appropriate distance from the surface of the substrate to remove one or plural layers of coating material from the edge of the substrate." (Office Action dated 8/1/02 at p. 6.) It is unclear whether this statement is a conclusion based on the arguments presented above or a separate argument attempting to support the rejection. If the statement is the former, Applicant's arguments presented above and below refute that conclusion. If the statement is the latter, the conclusory nature of the Examiner's statement fails to suggest motivation one of ordinary skill in the art would have to choose that option (*see Ethicon*, 41 U.S.P.Q.2d at 1233). Either way, the statement in no way cures the other flaws with the attempted rejection.

2. The express of teachings of Uchida and Honda discourage their combination in general and the proposed modification in particular

In addition to the flaws in the Examiner's current and prior attempts to combine Uchida and Honda, Applicant contends that any attempt to combine those references will suffer due to the unavoidable fact that their teachings conflict to such a degree that one of ordinary skill in the art would be discouraged from combination. Hence, the *prima facie* burden for rejection cannot be met relying on this combination.

a) The express of teachings of Uchida and Honda conflict on the very point relied on by examiner

The most relevant conflict between the references concerns the very point relied upon by the Examiner – contact between the apparatus and a workpiece layer. As the Examiner has admitted and Applicant has more forcefully emphasized, Uchida affirmatively and expressly teaches physically contacting its suction nozzle apparatus to a workpiece layer; such teaching is not only clearly illustrated in Uchida's relevant drawing but also articulated in the text. (Uchida translation at 3 (disclosing a suction nozzle placed "immediately opposite" the coating material to the extent that the nozzle actually comes into "contact" with the coating solution); FIG. 3.) Moreover, Uchida gives one of ordinary skill in the art a reason for such a configuration; specifically, Uchida expresses that its apparatus and method of use avoids the clogging during operation, as suffered by prior art devices and methods. (Uchida translation at p. 2, ln. 38-41; p. 4, ln. 12-17.) The Examiner's attempt to trivialize such disclosure throughout prosecution merely demonstrates the Examiner's failure to consider the reference as a whole as well as the Examiner's improper use of hindsight. (See *McLaughlin*, 170 U.S.P.Q. at 212.) Further, Uchida's teachings regarding contacting a workpiece layer with an apparatus are not accidental nor are they incidental given the articulated clogging problem Uchida seeks to solve and given that such teachings were validated as recently as the 1990's with Isono's publication.

Honda's apparatus, on the other hand, teaches expressly avoiding contacting any part of any layer of the workpiece during operation. (Honda translation at p. 3, ln. 40 (expressly having its

nozzle “draw in air with its vacuum suction part”); FIG. 3.) Further, the Examiner appears to believe that Honda’s configuration prevents wear and tear on the apparatus (Office Action dated 8/1/02 at p. 6; Office Action dated 11/19/01 at p. 2 (citing the previous Office Action); Office Action dated 2/28/01 at p. 4-5.) Thus, according to the Examiner’s own admission repeated throughout prosecution, one of ordinary skill in the art considering Uchida in light of Honda would view Uchida as undesirably inviting excess wear and tear on suction/dispensing devices. Conversely, such an artisan considering Honda in light of Uchida would view Honda as unnecessarily risking clogging. As a result, one of ordinary skill in the art would be discouraged from combining these references.

19

b) The express of teachings of Uchida and Honda conflict in general

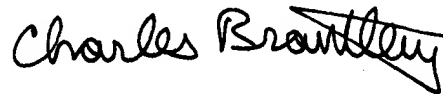
In addition, broadening the consideration of the references to encompass their more general matters would even further discourage the ordinary artisan from combination. In a manner analogous to the Examiner’s attempted Kottman/Honda combination, Applicant contends that the fundamental purpose of Uchida and Honda conflict to the highest degree. As mentioned above, the main purpose and function of Honda is to make the time for developing the resin at the substrate edge equal to the time for developing the resin at the interior of the substrate. (Honda translation at ¶¶0007, 0011.) Honda achieves this by using concentrated developer at the substrate’s edge to counteract its thicker resin. (*Id.* at ¶¶0006, 0007, 0011.) Because the substrate’s edge is equally developed in comparison to the substrate’s interior, it follows that the resin-removal process may be applied equally across Honda’s substrate, with no need for a specially-configured cleaning device or methods for the periphery. (*See Id.* at ¶0007.) However, Uchida proposes just such a cleaning device and method. Specifically, Uchida addresses suctioning coating liquid from the edges of its workpiece (Uchida translation at §2.) In the subsequent section, Uchida notes the tendency of a thickened coating layer to form at the edges of the workpiece, suggests spraying liquid onto the edges of its workpiece, and again indicates that its device suctions up coating solution from the workpiece sides (*Id.* at §3.) As a result, Honda teaches one of ordinary skill in the art that the devices, materials, and methods in Uchida, are unnecessary. Conversely, Uchida teaches one of ordinary skill in the art that Honda’s techniques are unnecessary because Uchida’s

special treatment of the substrate's periphery eliminates the need for Honda's special pre-treatment in that area. Thus, because each reference refutes the main purpose and function of the other, one of ordinary skill in the art would be discouraged from combining such references. Applicant submits that such an argument is as effective against the Uchida/Honda combination as it is against the current Kottman/Honda combination and the previously withdrawn Honda/Matsumura combination (*see* Appeal Brief at p. 5-6).

Conclusion

In light of the above amendments and remarks, Applicant submits that claims 12-33 are allowable over the applied references. Therefore, Applicant respectfully requests reconsideration of the Examiner's rejections and further requests allowance of all of the pending claims. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact Applicant's undersigned attorney at the number indicated.

Respectfully submitted,



Date: 12/2/2

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Appendix 1:

In re Carlson, 983 F.2d 1032, 25 U.S.P.Q.2d 1207 (Fed. Cir. 1992).

In re Carlson

Court of Appeals, Federal Circuit

No. 92-1248

Decided December 16, 1992

United States Patents Quarterly Headnotes

PATENTS

[1] Patentability/Validity -- Anticipation -- Prior art (Section 115.0703)

Patentability/Validity -- Obviousness -- Relevant prior art -- In general (Section 115.0903.01)

German "Geschmacksmuster," which is design registration obtained by applicant from German government after performing certain registration procedures, including deposit, qualifies as foreign patent for purposes of 35 USC 102(a), since it is completely "available to the public," even though actually viewing such design in German city may impose burden, since such burden is imposed by law upon hypothetical person of ordinary skill in art who is charged with knowledge of all contents of relevant prior art, and since actual knowledge of Geschmacksmuster is not required, in that hypothetical person is presumed to know all pertinent prior art, whether or not applicant is actually aware of its existence.

PATENTS

[2] Patentability/Validity -- Obviousness -- Relevant prior art -- Particular inventions (Section 115.0903.03)

Patentability/Validity -- Design patents (Section 115.17)

Design for dual compartment bottle is obvious in light of prior art, even though prior art references emphasize asymmetry, whereas claimed design is symmetrical around plane vertically bisecting bottle midway between bottle caps, since, in field of art in which products are deliberately designed as asymmetrical in order to create distinctive, memorable images, it would have been obvious to create "normal," or symmetrical, orientation for design.

PATENTS

Particular patents -- Design -- Bottle

Des. 289,855, Carlson, dual compartment bottle, rejection, in re-examination proceeding, of claim as unpatentable affirmed.

*1208 Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Revlon Inc. and Smiletote Inc. filed request for re-examination of Des. 289,855. From decision of the Board of Patent Appeals and Interferences affirming examiner's rejection of claim as unpatentable, patentee Bradley C. Carlson appeals. Affirmed.

Malcolm L. Moore, of Moore & Hansen (Chad A. Klingbeil, with him on brief), Minneapolis, Minn., for appellant.

Jameson Lee, associate solicitor (Fred E. McKelvey, solicitor, with him on brief; John W. Dewhirst, Richard E. Schafer, Albin F. Drost, and Lee E. Barrett, of counsel), for appellee.

Before Nies, chief judge, and Lourie and Clevenger, circuit judges.

Clevenger, J.

Bradley C. Carlson appeals from the January 9, 1992 decision of the U.S. Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences (Board), Appeal No. 91-2823, affirming the examiner's rejection in reexamination proceeding No. 90/001,935 of the claim of U.S. Design Patent No. 289,855 (Des. 289,855) as unpatentable under 35 U.S.C. Section 103 (1988). We affirm.

I

The two issues raised in this appeal are whether the design protected by a German Geschmacksmuster constitutes an "invention . . . patented . . . in . . . a foreign country" within the meaning of 35 U.S.C. Section 102(a) (1988) and thus may be considered prior art, and whether Des. 289,855 is unpatentable under 35 U.S.C. Section 103 (1988) as obvious in light of the pertinent prior art.

The application that culminated in issuance of Des. 289,855 on May 19, 1987 was filed with the PTO by Carlson on November 19, 1984. The claim of Des. 289,855 covers the ornamental design for a dual compartment bottle as depicted in the six figures included in the design patent.

On April 6, 1990, the PTO granted a request for reexamination of Des. 289, 855 filed by Revlon, Inc.

(Cite as: 25 U.S.P.Q.2d 1207, *1208)

and Smiletote, Inc., whom Carlson had accused of infringing Des. 289,855. During the reexamination, several references were considered which had not been before the examiner during prosecution of the initial application. The new references were (i) German Geschmacks muster No. 4244, issued to Firma Frankenwald-Presserei Horst Rebhan on May 9, 1984; (ii) U.S. Design Patent No. 86,749, issued to Salvatore Scuito on April 12, 1932, and entitled "Design for a Combined Flask and Drinking Glass Holder" (Scuito); and (iii) a magazine article entitled "News in Packaging," *Drug & Cosmetic Industry* (July 1978) (Redken article), illustrating the type of bottle cap used in Des. 289,855.

A Geschmacksmuster is a design registration obtained by an applicant from the German government after performing certain registration procedures. Professor Chisum, in a nutshell, thus describes the registration process in effect in 1984:

[A] person may register an industrial design or model by depositing with a local office an application with a drawing, photograph or sample of the article. Registration is effective on deposit, and lists of registered designs are published a short time after registration.

1 Donald S. Chisum, *Patents* Section 3.06 [2], at 3-107 (1992) (footnote omitted). The local office of deposit of a Geschmacksmuster in a *1209 city is the Amtsgericht, which is the local courthouse or seat of government of that city. The published list, which discloses certain particulars of each registration, is contained within the Bundesanzeiger, or Federal Gazette. The information typically disclosed in the Bundesanzeiger, with respect to a registered design, consists of a general description of the deposited design and the class of articles deposited, identifying numbers of the deposited designs, the name and location of the registrant, the date and time of registration, and the term of protection. In addition, the city location of the deposited design is also known because the published list is organized under city headings.

Certified copies of Geschmacksmuster are available from the Amtsgericht in which the registered designs are deposited. Such copies typically include the same information regarding the Geschmacksmuster as provided in the Bundesanzeiger, supra, including the city of deposit, and a copy of the drawing or photograph deposited. In the case of deposited sample articles, certified copies of Geschmacksmuster contain

photographs of the sample articles.

The Geschmacksmuster in this case embraces three different bottle designs, Nos. 3168-3170. Only Model No. 3168 is pertinent to the design claimed in Des. 289,855. That model is a bottle design consisting of two attached container portions divided by a striking, asymmetrical zig-zag line of demarcation. Each container portion has an externally threaded neck with an associated screw-on cap. As translated, both the Bundesanzeiger publication referring to the Geschmacksmuster and the certified copy of the Geschmacksmuster state, in relevant part: "An open package with plastic or synthetic bottles with stoppers. . . . Model for plastic products." The description as 'open' signifies that the deposited materials are available for public inspection. In addition, the certified copy of the Geschmacksmuster, which was supplied to the examiner as relevant prior art, includes a series of photographs of the three deposited designs taken from various orientations. The Bundesanzeiger identifies the German city of Coburg, Bavaria as the location of the registered design.

Scuito depicts an ornamental design for a combined flask and drinking glass holder. The flask and drinking glass are adjacent to one another and within a smooth-walled holder with a flat, oval base and smooth, plain walls equal in height to the body portions of the flask and glass. Both designs incorporate threaded portions on the receptacles' extremities, presumably to facilitate capping. The overall design disclosed by Scuito, however, is asymmetrical in that the necks of the adjacent receptacles are of different heights.

The final reference in the prior art, the Redken article, illustrates the type of bottle cap used by Carlson in his bottle design, and demonstrates the cap's existence in the art prior to the date of Carlson's invention.

II

Upon reexamination, the examiner rejected Carlson's argument that the Geschmacksmuster should not qualify as prior art under section 102(a), and found that the design protected by Des. 289,855 would have been obvious under section 103. Because the Geschmacksmuster was issued less than twelve months prior to the date of Carlson's application, 35 U.S.C. Section 102(b) (1988) is inapplicable.

On appeal, the Board cited as its guide and authority *In re Talbott*, 443 F.2d 1397, 170 USPQ 281 (CCPA 1971) (German Geschmacksmuster constitutes a

(Cite as: 25 U.S.P.Q.2d 1207, *1209)

"foreign patent" for purposes of 35 U.S.C. Section 102(d) (1988)), and *In re Monks*, 588 F.2d 308, 200 USPQ 129 (CCPA 1978) (no reason to distinguish between sections 102(a) and 102(d) in determining what constitutes a "foreign patent"). Based on those cases, the Board concluded that a Geschmacksmuster constitutes a patent for purposes of section 102(a). Consequently, the Board held that the Geschmacksmuster was pertinent prior art, and affirmed the examiner's conclusion that Des. 289,855 would have been obvious over the Geschmacksmuster in light of Scuito and the Redken article. Carlson timely appealed the Board's decision to this court.

III

Interpretation of statutory terms is a question of law which this court reviews de novo. *Midwest Plastic Fabricators, Inc. v. Underwriters Labs. Inc.*, 906 F.2d 1568, 1572, 15 USPQ2d 1359, 1362 (Fed. Cir. 1990); *Chaparral Steel Co. v. United States*, 901 F.2d 1097, 1100 (Fed. Cir. 1990).

Assuming no other bar to patentability, a person is entitled to a patent under U.S. law unless the same invention was patented by another person in a foreign country prior to the invention thereof by the U.S. applicant. 35 U.S.C. Section 102(a) (1988). The potential bar thus created by the existence of a patent issued in a foreign country gives rise to the availability of such a foreign patent as a prior art reference for the purpose of determining the validity of the claims in a U.S. patent or pending patent application. See *1210 *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 695, 218 USPQ 865, 867 (Fed. Cir. 1983), cert. denied, 464 U.S. 1043, 224 USPQ 520 (1984); *In re Zimmer*, 387 F.2d 990, 991, 156 USPQ 252, 253 (CCPA 1968).

A further bar to patentability arises if an applicant for a U.S. patent has been granted a patent in a foreign country on the same invention more than twelve months prior to the date the patent application is filed in the United States. 35 U.S.C. Section 102(d) (1988).

The precise words of section 102 read, in pertinent part:

A person shall be entitled to a patent unless--

(a) the invention was . . . patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or . . .

(d) the invention was first patented . . . by the applicant . . . in a foreign country prior to the date of the application for patent in this country on an application for patent . . . filed more than twelve months before the filing of the application in the United States. . . .

35 U.S.C. Section 102 (1988). With respect to design patents, however, Congress has provided that the time bar in section 102(d) is six months. 35 U.S.C. Section 172 (1988).

In *In re Talbott*, our predecessor court decided, as a matter of first impression, that a design protected by a Geschmacksmuster qualifies under section 102(d) as an invention patented in a foreign country for purposes of applying the statutory time bar against an application for a U.S. design patent covering the same subject matter. 443 F.2d at 1398-99, 170 USPQ at 282. The court rejected the argument that a Geschmacksmuster should not be deemed to fall within section 102(d) because the copyright nature of the rights protected by the Geschmacksmuster is substantially different from the rights inherent in a U.S. design patent. *Id.*, 170 USPQ at 281-82. This rejection was based on reasoning adopted in the case by the Board, which in turn relied upon the opinion of Examiner-in-Chief P.J. Federico in *Ex Parte Weiss*, 159 USPQ 122 (Pat. Off. Bd. App. 1967). With regard to construing "patented . . . in a foreign country" under section 102(d), Federico concluded that the rights and privileges attaching to the protection granted by foreign governments need not be coextensive with the exclusive rights granted under U.S. law, so long as the foreign rights granted are both substantial and exclusive in nature. *Id.* at 123-24. Cf. *In re Howarth*, 654 F.2d 103, 105 n.3, 210 USPQ 689, 690 n.3 (CCPA 1981) ("Not every foreign document labelled a 'patent' is a patent within the meaning of 35 U.S.C. Section 102(a) or (b).") (citing *In re Ekenstam*, 256 F.2d 321, 323, 118 USPQ 349, 351 (CCPA 1958)). Because a Geschmacksmuster conveys substantial and exclusive rights in the design, the Board in *Weiss* held that a Geschmacksmuster qualifies as prior art under section 102(d). 159 USPQ at 124. The court in *Talbott* expressly "adopt [ed] as our own, the reasoning set out so completely in [*Weiss*]." 443 F.2d at 1399, 170 USPQ at 242.

Our predecessor court also had occasion to consider whether the phrase "patented . . . in . . . a foreign country," as used in section 102(a), should have a different meaning from the same language used in section 102(d). The issue arose in *In re Monks*, a case

• (Cite as: 25 U.S.P.Q.2d 1207, *1210)

concerned with the bar to patentability under section 102(d). The Solicitor contended that the date upon which an invention is patented in a foreign country should differ for the purposes of section 102(a) versus section 102(d). At stake was whether the British patent date should be the date the patent finally issued, or an earlier date when the contents of the patent were initially published. 588 F.2d at 309, 200 USPQ at 130. Emphasizing that section 102(d) relates to foreign patents of the U.S. applicant (of which the U.S. applicant must necessarily be aware), whereas section 102(a) relates to foreign patents of others, the Solicitor argued that the foreign patent date under section 102(d) could properly precede the like date under section 102(a). The court refused to draw such a distinction:

First, there is no basis in the [Patent] Act or its legislative history for making such a distinction. The statute uses the identical phrase, "patented . . . in a foreign country," in each of these sections. Nowhere in the legislative history is there the slightest suggestion that these same phrases be interpreted differently.

Id. at 310, 200 USPQ at 131. Although this observation was made with respect to the date on which a foreign patent becomes "patented" within the meaning of section 102(d), the language applies equally as well to the present issue of whether a distinction should be drawn between subsections (a) and (d) of section 102 when considering whether a Geschmacksmuster is a foreign patent citable as prior art in a section 103 analysis.

IV

Whether a Geschmacksmuster is a foreign patent under section 102(a) is a question of *1211 first impression. That a Geschmacksmuster qualifies as a patent for section 102(d) purposes is settled law, embraced by the Solicitor, unchallenged by Carlson, and a proposition with which we do not disagree.

Notwithstanding the holding in Talbott and the strong conclusion in Monks that the test for determining what constitutes a foreign patent should not differ between subsections (a) and (d) of section 102, Carlson invites this court to deny Geschmacksmuster the status of patents under section 102(a).

Carlson first points to language in Talbott that recognizes the different situations addressed by subsections (a) and (d) of section 102 and states that the policy considerations underlying the different

subsections, "while overlapping to some extent, are not necessarily identical." 443 F.2d at 1399, 170 USPQ at 282. Carlson claims to base his argument on this premise.

We do not dispute that section 102(a), relating to potential prior art in the form of patents issued in a foreign country and held by persons other than the U.S. patent applicant, serves a purpose akin to, but different from, section 102(d), which specifies the time within which the owner of a foreign patent must apply for a U.S. patent on the same invention. That distinction, however, does not suggest that a Geschmacksmuster lacks the necessary credentials to qualify as a patent under section 102(a).

Nevertheless, Carlson asserts that the correct interpretation of section 102(a) requires that a foreign patent only serve as prior art if it discloses its invention in a readily-accessible fashion. In essence, Carlson argues that the embodiment of foreign protection must take a form that fully discloses the nature of the protected design in a medium of communication capable of being widely disseminated. Because this requirement is clearly not satisfied by depositing a model in a city courthouse in a foreign land, the embodiment cannot constitute an invention patented in a foreign country for purposes of section 102(a) because it is incapable of providing detailed instruction to a large enough number of persons remote from the location of deposit. Moreover, Carlson argues, since the Bundesanzeiger entry does not explicitly refer to dual-compartment containers, it cannot provide notice of the existence of the pertinent model of the Geschmacksmuster to a designer of such containers.

Carlson correctly surmises that section 102(a) contains a requirement that a foreign patent be disclosed in order to qualify as prior art under section 102(a). The requirement, however, is only that the patent be "available to the public." *In re Ekenstam*, 256 F.2d 321, 324, 325, 118 USPQ 349, 351, 353 (CCPA 1958) (citing *Brooks v. Norcross*, 4 F. Cas. 294, 296 (C.C.D. Mass. 1851) (No. 1,957) (inventions protected by secret/"private" patents do not qualify as "patented abroad" under U.S. law)).

Because the description of the Geschmacksmuster in the Bundesanzeiger does not specifically refer to a multicompartment container, Carlson would have us deem the designs incorporated therein outside of the relevant field of prior art. His argument, however, represents an overly narrow view of the prior art germane to his invention. See, e.g., *In re Deminski*,

• (Cite as: 25 U.S.P.Q.2d 1207, *1211)

796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986) (reference must be "within the field of the inventor's endeavor," or if not, "reasonably pertinent to the particular problem with which the inventor was involved." (quoting *In re Wood*, 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979))).

The Bundesanzeiger entry regarding the Geschmacksmuster at issue in this appeal clearly refers to a single package incorporating multiple plastic bottles, thereby alerting the public to potentially relevant designs, and directs the notified reader to proceed to Coburg to obtain the actual design. Once in Coburg, the protected design is completely "available to the public" through the certified copy of the Geschmacksmuster.

We recognize that Geschmacksmuster on display for public view in remote cities in a far-away land may create a burden of discovery for one without the time, desire, or resources to journey there in person or by agent to observe that which was registered and protected under German law. Such a burden, however, is by law imposed upon the hypothetical person of ordinary skill in the art who is charged with knowledge of all the contents of the relevant prior art. *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1454, 223 USPQ 603, 614 (Fed. Cir. 1984); see also *In re Hall*, 781 F.2d 897, 899-900, 228 USPQ 453, 456 (Fed. Cir. 1986) (doctoral dissertation, catalogued and available at Freiburg University, Germany, provides sufficient "public accessibility" for a printed publication under section 102(b)).

Moreover, actual knowledge of the Geschmacksmuster is not required for the disclosure to be considered prior art. To determine patentability, a hypothetical person is presumed to know all the pertinent prior art, whether or not the applicant is actually aware of its existence. *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988); see also *In re Howarth*, 654 F.2d 103, 106, 210 USPQ 689, 692 (CCPA 1981) ("Section 102 has as one objective that only the first inventor obtain a patent. . . . Foreign 'patents' and foreign 'printed publications' preclude the grant of a patent whether or not the information is commonly known. Under [section] 102 a conclusive presumption of knowledge of such prior art is, in effect, a statutorily required fiction.").

[1] In conclusion, we hold that because the Geschmacksmuster fully discloses the design upon which German law conferred the exclusive rights attendant to the registration, the Geschmacksmuster

qualifies as a foreign *1212 patent for purposes of section 102(a), and therefore constitutes prior art for use in the obviousness analysis under section 103. *In re Zimmer*, 387 F.2d 990, 991, 156 USPQ 252, 253 (CCPA 1968). Cf. *In re Mulder*, 716 F.2d 1542, 1545, 219 USPQ 189, 193 (Fed. Cir. 1983) ("[P]rinted publication . . . is prior art under [section] 102(a), . . . , and thus also 'prior art' under [section] 103.").

V

Whether an invention would have been obvious is a conclusion of law based upon the factual underpinnings stated in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). Thus, this court reviews an obviousness determination by the Board de novo, while reviewing the factual findings underlying the obviousness determination for clear error. *In re Woodruff*, 919 F.2d 1575, 1577, 16 USPQ2d 1934, 1935 (Fed. Cir. 1990).

Carlson argues that even if the Geschmacksmuster is considered as prior art, Des. 289,855 would nevertheless not have been obvious in light of the Geschmacksmuster, Scuito, and the Redken article. Carlson relies on the fact that the Geschmacksmuster and Scuito, the only references pertinent to the design of a dual compartment bottle, emphasize asymmetry, whereas his dual-compartment bottle design is symmetrical around a plane vertically bisecting the bottle midway between the bottle caps. Citing *In re Cho*, 813 F.2d 378, 1 USPQ2d 1662 (Fed. Cir. 1987), Carlson concludes that since none of the references teach a symmetrical design for a dual compartment bottle, Des. 289,855 must have been nonobvious. We disagree.

In re Cho, concerned with the ornamental design of a bottle cap, contains a succinct statement of when a design patent application should be rejected under section 103:

To support [such] a rejection . . . , the teachings of references must be such as to have suggested the overall appearance of the claimed design. . . . Thus, if the combined teachings suggest only components of the claimed design but not its overall appearance, a rejection under section 103 is inappropriate.

Id. at 382, 1 USPQ2d at 1663-64 (citations omitted). This language describes the situation where each individual element of the design is disclosed in the pertinent prior art, but those elements have not been

(Cite as: 25 U.S.P.Q.2d 1207, *1212)

combined. In the present case, however, a person of ordinary skill in the art, or stated otherwise, "a designer of ordinary capability who designs articles of the type presented," *id.*, 1 USPQ2d at 1663 (citing *In re Nalbandian*, 661 F.2d 1214, 1216, 211 USPQ 782, 784 (CCPA 1981)), need not necessarily study the prior art in order to understand the potential use of a symmetrical design.

[2] In a field of art such as this, where products are deliberately designed as asymmetrical in order to create distinctive, memorable images, it would have been obvious to one of ordinary skill in the art to create a "normal" or symmetrical orientation for a design. Cf. *In re Wilson*, 345 F.2d 1018, 1020, 145 USPQ 558, 559 (CCPA 1965) (pleasing symmetry is not nonobvious where it represents no more than obvious symmetry with convenience in mind). Indeed, knowledge of symmetry is one reason why more complex designs are developed -- the expected

design configuration is one of symmetry. In any event, Scuito and the Geschmacksmuster manifest "the overall appearance of the claimed design," since it would have been obvious to bury the Geschmacksmuster's line of demarcation between the vessels and create the smooth, uniform surface found in Scuito. The difference in the design of a smooth-walled dual compartment container and one with a visible line of demarcation is not a difference such as would establish the nonobviousness of the design as a whole under *In re Cho*. Because the relevant prior art renders Carlson's design obvious under section 103, the judgment of the Board is **AFFIRMED**.

C.A.Fed.

25 U.S.P.Q.2d 1207

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